



Section D

Spent Nuclear Fuel

PROJECT MANAGERS

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SUMMARY

The Spent Nuclear Fuel (SNF) mission consists of the Spent Nuclear Fuel Project WBS 1.3.1.1 (Project Baseline Summary [PBS] WM01) and the subsequent Canister Storage Building (CSB) Operations Project WBS 1.3.2.1 (PBS WM02), which does not start until FY 2004.

NOTE: Unless otherwise noted, the Safety, Conduct of Operations, Milestone Achievement, and Cost/Schedule data contained herein is as of October 31, 2000. All other information is as of November 24, 2000.

Fiscal year-to-date milestone performance (EA, HQ, and RL) shows that two out of five milestones (40 per cent) are overdue.

The Milestone Achievement details, found following the cost and schedule variance analysis, provide further information on all milestone types.

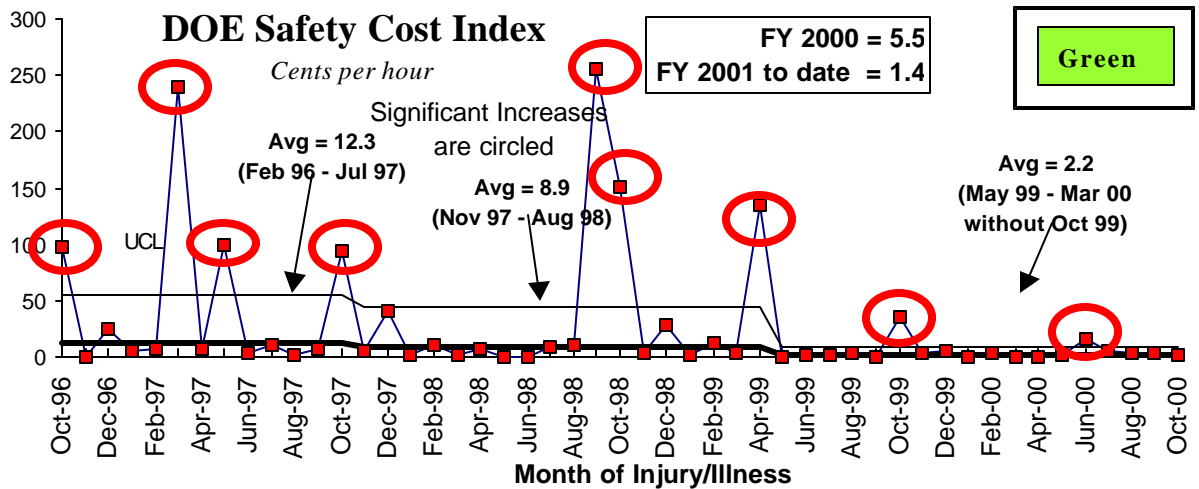
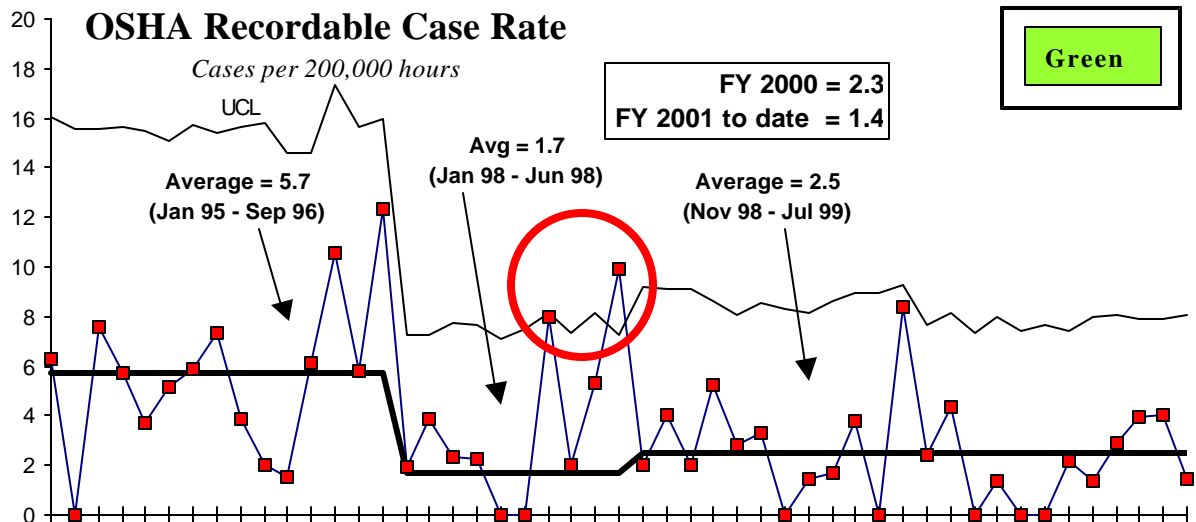
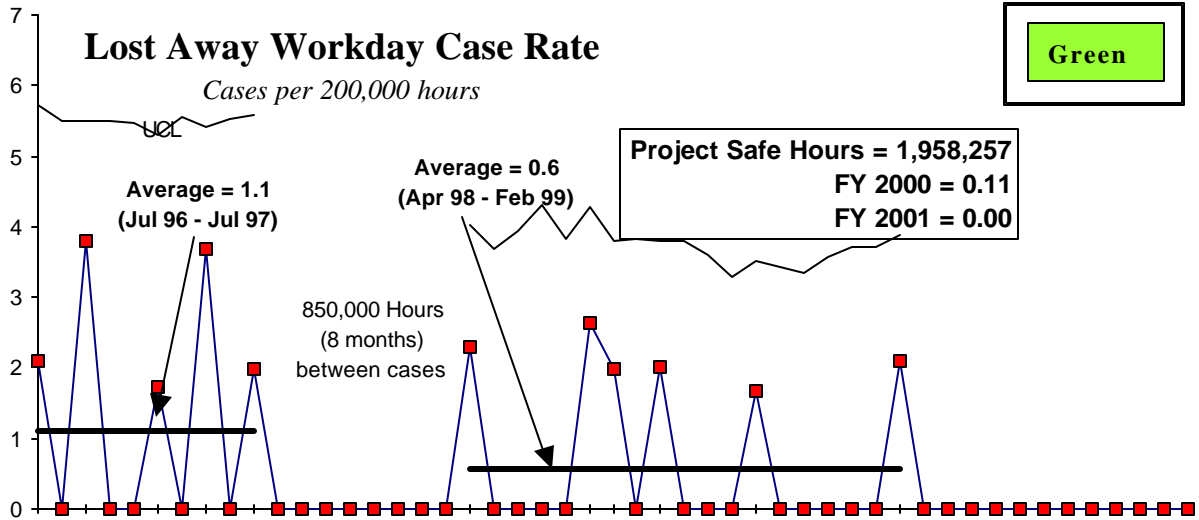
ACCOMPLISHMENTS

- Successfully completed DOE Operational Readiness Review (ORR) on the Canister Storage Building (CSB), K West (KW) Basin, and Project transportation systems on November 16, 2000 and completed the Contractor ORR for the Cold Vacuum Drying (CVD) Facility on November 24, 2000. Overall, there were 13 pre-start findings, 11 post-start findings, and 4 observations. Under Noteworthy Practices the DOE ORR Team stated:
 - The SNF Project has done a good job of managing the S/RID program
 - The SNF Project has done a good job promoting safety
 - The SNF Project QA inspectors are qualified in inspection methodsThe pre-start findings have been addressed and post-start findings are being addressed.
- Completed loading of the first six Multi-Canister Overpack (MCO) fuel baskets and placed in the queue; awaiting authorization to place into first production MCO.
- Successfully performed two million safe hours without a lost time accident. The new Spent Nuclear Fuel (SNF) Project record comes after two previous one million safe hour records were achieved during the period between April 1999 and April 2000.
- Over the past two years the SNF Project and RL have been working with the Defense Nuclear Facilities Safety Board (DNFSB) on several technical issues that were not fully resolved. The DNFSB listed these issues in a letter to RL dated September 2000. In response the SNF Project and RL prepared a detailed response and met with DNFSB Staff. All remaining technical issues with DNFSB Staff have now been resolved.

SAFETY

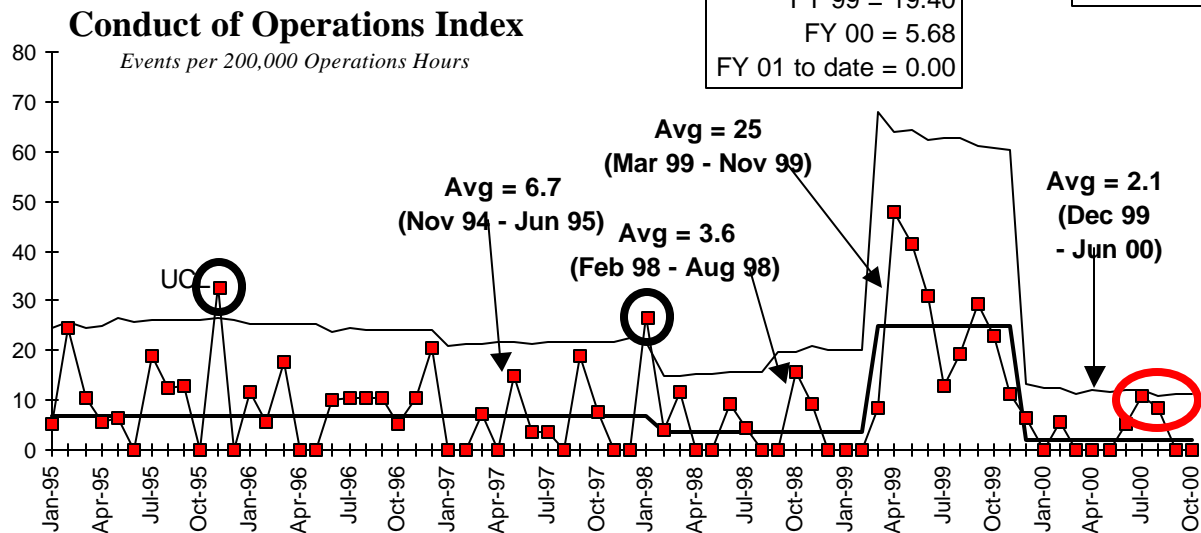
The project has achieved over 2,000,000 safe work hours on November 15, 2000. No Lost Away Workday Cases have been reported in the last twelve months. SNF OSHA recordable case rate for FY 2000 was 2.3, higher than the FH goal of 0.9.

PHMC Environmental Management Performance Report – December 2000
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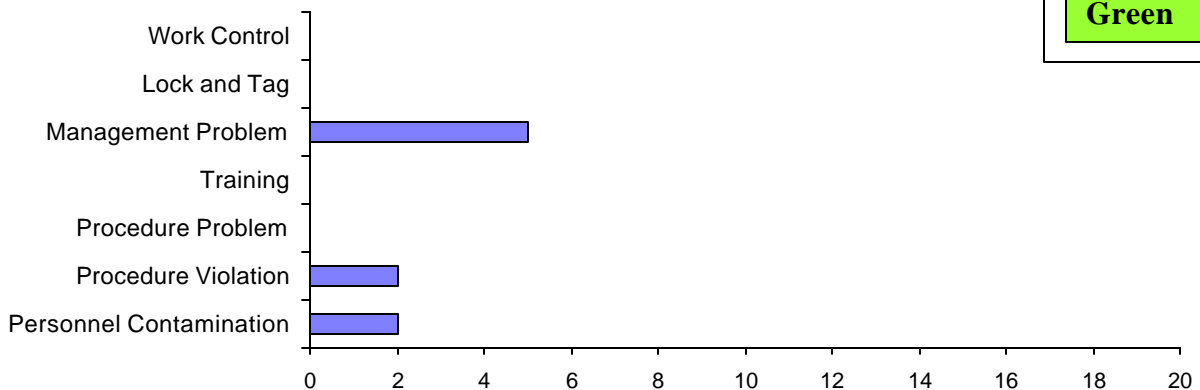
CONDUCT OF OPERATIONS / ISMS STATUS

Green



Number of Reports Past 12 Months

Green



ISMS STATUS

- Performed management assessment of SNF Project Integrated Safety Management System (ISMS) performance for FY2000 that demonstrated the SNF Project is satisfactorily performing to the ISMS Core Functions (CF) and Guiding Principles (GP). Report issued October 16, 2000.
- Project Director issued FY2001 Management Assessment Plan that has each assessment topic linked to an ISMS CF or GP. Specific direction provided to ensure each management assessment report has a section that specifically discusses the ISMS CF or GP and includes a performance conclusion. Plan issued November 2, 2000.
- SNFP personnel participated in Project Hanford Management Contract (PHMC) ISMS Center of Expertise activities of developing PHMC ISMS Sustain and Maintain Plan for FY2001.

BREAKTHROUGHS / OPPORTUNITIES FOR IMPROVEMENT

Breakthroughs

Nothing to report at this time.

Opportunities for Improvement

Green

The Alternative Fuel Transfer Strategy (AFTS) will move fuel from the K East (KE) basin to the K West (KW) basin for processing in lieu of processing fuel in the KE basin as currently baselined. This strategy will reduce worker radiation exposure, safety risks, and increases the confidence level that the life cycle cost and schedule objectives can be achieved.

UPCOMING ACTIVITIES

- Complete RL Operational Readiness Review for Canister Vacuum Drying (CVD) Facility in November 2000.
- Begin KW Basin fuel removal, drying and storage operations in November 2000.
- Submit Tri-Party Agreement (TPA) Change Request for Milestone M-34-06-T01 “Initiate K West Basin spent nuclear fuel canister cleaning operations” December 2000.
- Continue receipt of Multi-Canister Overpack (MCO) shipments through FY 2001.
- Submit Annual Debris Report to Department of Ecology/Environmental Protection Agency (EPA) in May 2001.

COST PERFORMANCE (\$M):

	BCWP	ACWP	VARIANCE
Spent Nuclear Fuel	\$7.3	\$9.8	- \$2.4*

*Rounding

The unfavorable cost variance of \$2.4 million (33 percent) is due to additional facility start up and engineering required to resolve first-of-a-kind equipment issues at K Basins and the CVD Facility and subsequent extension of the Operational Readiness Review process.

SCHEDULE PERFORMANCE (\$M):

	BCWP	BCWS	VARIANCE
Spent Nuclear Fuel	\$7.3	\$7.3	\$0.0

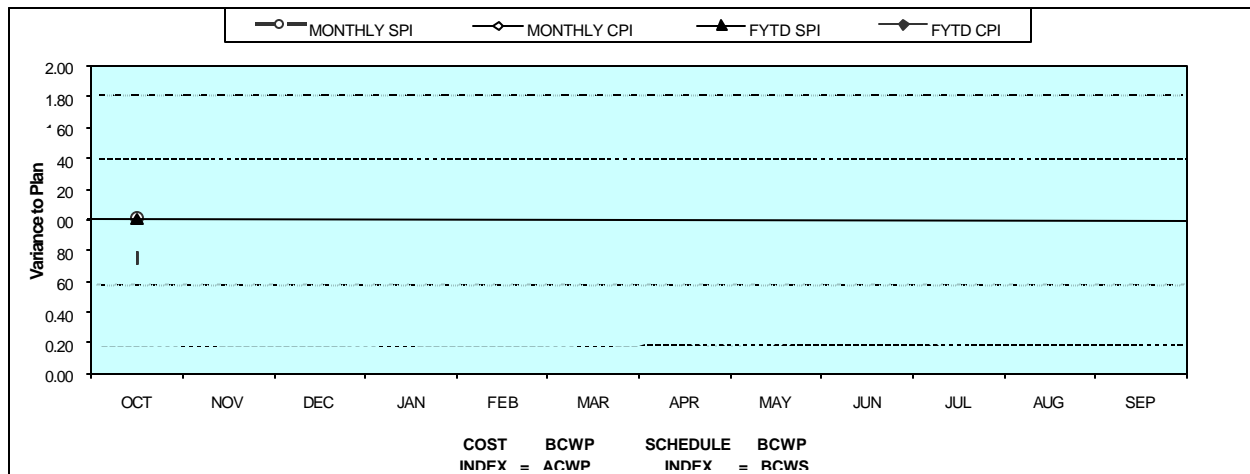
There is no schedule variance.

FY 2001 COST/SCHEDULE PERFORMANCE – ALL FUND TYPES CUMULATIVE TO DATE STATUS – (\$000)

		FYTD							
By PBS		BCWS	BCWP	ACWP	SV	%	CV	%	PEM
PBS WM01	Spent Nuclear	\$ 7,302	\$ 7,317	\$ 9,757	\$ 16	0%	\$ (2,440)	-33%	\$ 189,761
WBS 1.3	Fuel Project								
Total		\$ 7,302	\$ 7,317	\$ 9,757	\$ 16	0%	\$ (2,440)	-33%	\$ 189,761

COST/SCHEDULE PERFORMANCE INDICES (MONTHLY AND FYTD)

Green



FY 2001	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MONTHLY SPI	1.00											
MONTHLY CPI	0.75											
FYTD SPI	1.00											
FYTD CPI	0.75											
MONTHLY BCWS	\$7,302	\$11,904	\$10,154	\$17,677	\$12,484	\$13,109	\$14,348	\$18,713	\$14,846	\$15,388	\$19,966	\$33,870
MONTHLY BCWP	\$7,317											
MONTHLY ACWP	\$9,757											
FYTD BCWS	\$7,302	\$19,206	\$29,360	\$47,037	\$59,521	\$72,629	\$86,978	\$105,691	\$120,537	\$135,925	\$155,891	\$189,761
FYTD BCWP	\$7,317											
FYTD ACWP	\$9,757											

COST VARIANCE ANALYSIS: (- \$2.4M)

WBS/PBS

Title

1.3.1/WM01

Spent Nuclear Fuel Project

Description/Cause: The unfavorable cost variance is due to additional startup and engineering required to resolve first-of-a-kind equipment issues at K Basins and Canister Vacuum Drying (CVD) facility and subsequent extension of the Operational Readiness Review (ORR) process.

Impact: Variance impact requires corrective action below.

Corrective Action: A staff demobilization plan has been developed, which will get costs in line with the baseline. The demobilization plan will be initiated following facility startup.

SCHEDULE VARIANCE ANALYSIS: (\$0.0M)

WBS/PBS

Title

1.3.1/ WM01

Spent Nuclear Fuel Project

Description /Cause: None.

Impact: None.

Corrective Action: None.

ISSUES

Technical Issues

There is nothing to report at this time.

DOE/Regulator/External Issues

- During the Canister Storage Building (CSB) readiness review it was determined that there are American Society of Mechanical Engineers (ASME) N509 and ASME N510 compliance problems with the main ventilation exhaust system.
 - A code assessment has been completed to define the scope of the non-compliance.
 - Preliminary meetings with Washington Department of Health (WDOH) have taken place and will continue as a path forward is developed.
 - A revision to the Notice of Construction has been requested from WDOH, which implements waiver to certain code requirements.

BASELINE CHANGE REQUESTS CURRENTLY IN PROCESS (\$000)

Green

PROJECT CHANGE NUMBER	DATE ORIGIN.	BCR TITLE	COST IMPACT \$000	S C H	T E C H	DATE TO CCB	CCB APR'VD	RL APR'VD	CURRENT STATUS
FH-2001-002	9/25/00	FY2001 Fee Reduction to 90%	-\$1,030	Y	N				At DOE-RL
SNF-2000-001	10/20/00	DOE Generated ORR Delays to SNF Critical Path		Y	N				In Preparation
SNF2001-002	10/26/00	MCO Production Rate Changes Based on Actual Test Results		Y	Y				In Preparation
SNF-2001-003	11/13/00	SNF Alternate Fuel Transfer Strategy		Y	Y				In Preparation
SNF-2001-004	11/14/00	Ongoing CSB Operations Revised Planning Basis (CP02)		Y	N				In Preparation
ADVANCE WORK AUTHORIZATIONS									
		Nothing to report at this time.							

MILESTONE ACHIEVEMENT

MILESTONE TYPE	FISCAL YEAR-TO-DATE				REMAINING SCHEDULED			Total FY 2001
	Completed Early	Completed On Schedule	Completed Late	Overdue	Forecast Early	Forecast On Schedule	Forecast Late	
Enforceable Agreement	0	0	0	0	0	0	0	0
DOE-HQ	0	0	0	0	0	1	0	1
RL	0	0	0	2	0	2	0	4
Total Project	0	0	0	2	0	3	0	5

Only TPA/EA milestones and all FY2001 overdue and forecast late milestones are addressed in this report. Milestones overdue are deleted from the Milestone Exception Report once they are completed. The following chart summarizes the FY2001 TPA/EA milestone achievement and a Milestone Exception Report follows. The last milestone table summarizes the first six months of FY2002 TPA/EA milestones.

FY 2001 Tri-Party Agreement / EA Milestones

Number	Milestone Title	Status
M-34-16 (S00-01-900)	"Initiate Removal of K West Basin Spent Nuclear Fuel"	Due 11/30/00 – One week behind schedule.
M-34-06-T01 (S04-99-521)	"Initiate K West Basin Spent Nuclear Fuel Canister Cleaning Operations"	Due 12/31/00 – TPA Change request in preparation to extend due date.
M-34-05-T01 (S04-01-515)	"Submit DOE Approved Report Debris to Ecology/EPA"	Due 05/31/2001

DNFSB Commitments

	Nothing to report at this time.	
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MILESTONE EXCEPTION REPORT

<u>Number/WBS</u>	<u>Level</u>	<u>Milestone Title</u>	<u>Baseline Date</u>	<u>Forecast Date</u>
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OVERDUE – 2

S03-98-625	RL	RL Operational Readiness Review (ORR) Report Issued	10/13/00	11/30/00
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1.3.1

Cause: Technical issues at Canister Vacuum Drying (CVD) facility delayed Contractor ORR.

Impact: None

Corrective Action: None

S03-98-620 RL Critical Decision 4 (CD4) – Fuel 10/31/00 11/30/00
 Movement Operations (FMO) KW Canister
 Storage Building (CSB)/Canister Vacuum
 Drying (CVD)/Fuel Retrieval System (FRS)
 KW/Multi-Canister Overpack (MCO)/
 Crane Mods)

1.3.1

Cause: Technical issues at CVD delayed contractor ORR.

Impact: None

Corrective Action: None

FY 2000 OVERDUE - 1

S03-98-602 RL Contractor Operational Readiness Review 09/07/00 11/24/00

1.3.1

Cause: Unforeseen delays in construction and testing brought on from technical issues within the facilities.

Impact: This milestone was completed November 24, 2000.

Corrective Action: None

FY 2002 Tri-Party Agreement / EA Milestones

Number	Milestone Title	Status
M-34-12 (S04-97-621)	"Complete Construction of KE Basin Integrated Water Treatment System (IWTS)"	Due 03/31/2002
M-34-13B-T01 (S04-98-356)	"Complete Construction & Installation of KE Basin FRS"	Due 03/31/2002
M-34-14B-T01 (S06-97-012)	"Complete KE Basin Cask Facility Mods"	Due 02/28/2002

DNFSB Commitments

	Nothing to report at this time.	
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PERFORMANCE OBJECTIVES

Initiate Fuel Removal (RC-1-1.1a) — First MCO of SNF is moved from KW Basin and transported to the CVD for processing by December 7, 2000.

Green

- Currently ahead of schedule to move the first MCO by December 7, 2000.

Amount of Fuel Removed for K Basins and is in Transport, in CVD or at the CSB (RC-1-1.1b) - Total amount of SNF that has been moved from KW Basin and is in transport, in CVD or at the CSB by September 30, 2001 accumulates to 51 MCOs/~268 Metric Ton of Heavy Metal (MTHM).

Green

- A BCR will be submitted by December 31, 2000 to modify FY 2001 expectation to better align with operational experience and actual test results.

Complete KE IWTS Definitive Design – (RC-1-2) — Satisfactorily complete KE IWTS definitive design that factored in the lessons learned from KW IWTS design/construction issues by May 18, 2001.

Green

- Currently on schedule to meet May 18, 2001 date.

KEY INTEGRATION ACTIVITIES

Spent Nuclear Fuel (SNF) final disposition interface activities, including Office of Civilian Radioactive Waste Management (OCRWM) Quality Assurance (QA) Program implementation, are ongoing with the National SNF Program. The SNF Project participated in a National SNF Program strategy meeting that resulted in commitments for resolution of issues related to OCRWM data qualification requirements, licensing strategy for RL-owned SNF inventories, and analyses for evaluating acceptability of N Reactor fuel receipt at Yucca Mountain.

The SNF Project and Waste Management Project continued preparations for K Basins' sludge removal and Shippingport (PA) Pressurized Water Reactor Core 2 SNF removal.

The River Corridor Project and the SNF Project interfaced on contracting strategies and records management for 324 Building (B Cell) SNF removal.

Neutron Radiography Facility Training Research and Isotope Production General Atomics (TRIGA) and Fast Flux Test Facility (FFTF) SNF relocation planning is ongoing with the FFTF Project.

Bechtel Hanford, Inc. transmitted a revised transfer plan for SNF discovered during upcoming 105F and 105H reactor basins deactivation for SNF Project review and approval. This transfer plan incorporated earlier SNF Project comments.